

App'n. No. 09/811,581
Amd. dated September 16, 2003
Reply to Office Action of June 16, 2003

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-48. (Cancelled)

49. (Currently Amended) A process for producing composite metallic ultrafine particles with a core metal covered by a protective layer, consisting of:

providing a metal source having a metallic component selected from the group consisting of a metallic salt, a metallic oxide, and a metallic hydroxide,

providing an organic compound having a functional alcoholic ~~hydroxy~~ hydroxyl group, and

~~mixing the metallic salt metal source and the organic compound in nonaqueous state while heating the metallic salt and the organic compound at a temperature at which the metal components gather together to form the core metal, and the alcoholic hydroxyl group of the organic compound becomes bonded to a surface of the core metal, thereby forming the core metal and the protective layer of said organic compound to form a mixture of the metal source and the organic compound, and~~

Appln. No. 09/811,581
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heating the mixture of the metal source and the organic compound to a temperature at which the metallic components gather together to form the core metal, and the alcoholic hydroxyl group of the organic compound becomes bonded to a surface of the core metal, thereby forming the core metal and the protective layer of the organic compound.

50-59. (Cancelled)

60. (Currently Amended) ~~The composite metallic ultrafine particle according to claim 52, wherein said functional group is alcoholic hydroxyl~~ A composite metallic ultrafine particle comprising:

a core metal, made of a metal, having a diameter in a range of 1 to 100 nanometer, and

a protective layer made of an organic compound having a functional alcoholic hydroxyl group,

wherein the protective layer overlays a surface of the core metal and the functional alcoholic hydroxyl group of the organic compound is chemically bound by chemisorption to the surface of the core metal,

wherein the composite metallic ultrafine particle is produced by the steps comprising:

Appln. No. 09/811,581
Amd. dated September 16, 2003
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providing a metal source having a metallic component
selected from the group consisting of a metallic salt, a
metallic oxide, and a metallic hydroxide,

providing the organic compound having the functional
alcoholic hydroxyl group,

mixing the metal source and the organic compound to
form a mixture of the metal source and the organic compound,
and

heating the mixture of the metal source and the
organic compound to a temperature at which the metallic
components gather together to form the core metal, and the
alcoholic hydroxyl group of the organic compound becomes
bonded to a surface of the core metal, thereby forming the
core metal and the protective layer of the organic compound.

61. (Cancelled)